Name: _____ **Computer/Network Technician**

Directions:
Evaluate the student by entering the appropriate number to indicate the degree of competency.

Rating Scale (0-6):

- **0** **No Exposure** – no experience/knowledge in this area; program/course did not provide instruction in this area
- **1** **Unsuccessful Attempt** – unable to meet knowledge or performance criteria and/or required significant assistance
- **2** **Partial Demonstration** – met some of the knowledge or performance criteria with or without minor assistance
- **3** **Knowledge Demonstrated** – met knowledge criteria without assistance at least once
- **4** **Performance Demonstrated** – met performance criteria without assistance at least once
- **5** **Repetitive Demonstration** – met performance and/or knowledge criteria without assistance on multiple occasions
- **6** **Mastered** – successfully applied knowledge or skills in this area to solve related problems independently

NOTE:
* = Core competencies (essential for the first day on the job).

0	1	2	3	4	5	6	**A. Describe and safely interact with all computer systems, including ethics, communication, hardware, software, and tools.**	**Notes:**
							1. Describe historical evolution of computers, microcomputers and relationships to current computing	
							2. Compare and contrast mainframes, minicomputers, scientific workstations, and microcomputers	
							*3. Interpret advantages and disadvantages of decentralized computing	
							*4. Identify components of information system model (e.g., input, process, output)	
							*5. Practice ethical conduct in everyday procedures (e.g., piracy, licensing, intellectual property, standards of conduct, privacy, organizational policies and procedures, unauthorized access)	
							*6. Present solutions in a positive, tactful manner	
							*7. Explain software and hardware tools to support individuals with disabilities	
							*8. Create technical correspondence	
							Other:	

0	1	2	3	4	5	6	**B. Appreciate and apply all personal and workplace safety procedures**	**Notes:**
							1. Demonstrate procedures for handling, storing, and disposing of hazardous materials as per current federal and state guidelines	
							*2. Describe the operation of fire suppression resources, including fire extinguishers	
							*3. Identify electrical hazards	
							*4. Identify and practice work place safety, including eye protection and environmental hazards	
							*5. Identify and practice safe soldering methods	
							*6. Demonstrate safe and proper use of hand tools	

							*7. Identify hazard of RF radiation devices	
							*8. Demonstrate safe and proper use of AC line-operated equipment (e.g., isolation transformers, grounding, leakage current testing, GFI)	
							*9. Identify basic first aid resources and procedures	
							*10. Identify electrical, mechanical, chemical, and environmental hazards	
							Other:	

0	1	2	3	4	5	6	**C. Apply basic electronic skills consistent with industry and safety standards**	**Notes:**
							*1. Evaluate and test source of DC and AC signals and power	
							*2. Apply Ohm's law by evaluating series and parallel circuits	
							*3. Measure voltage, current, and resistance using multimeters (VOM, EVM, DVM)	
							*4. Demonstrate proficiency in soldering techniques according to the ANSI standard _____(or IEEE standard _____ or CET _____)	
							Other:	

0	1	2	3	4	5	6	**D. Design, assemble, and troubleshoot common hardware components/systems**	**Notes:**
							*1. Describe the function of various parts of a computer, including ports	
							*2. Assemble and configure a microcomputer from constituent parts	
							*3. Compare and contrast merits of various microprocessors for various architectures	
							*4. Compare and contrast current industry-standard busses	
							5. Design industry-standard workstation hardware systems	
							6. Design industry-standard server hardware systems	
							7. Install and remove common peripherals	
							*8. Verify operation of common peripherals	
							*9. Install and verify device drivers	
							*10. Perform burn-in/diagnostics	
							*11. Troubleshoot and repair subsystems	
							*12. Practice accepted anti-static (ESD) procedures	
							*13. Troubleshoot problems from electromagnetic interference (EMI)	
							*14. Identify resources for persons with special needs	
							*15. Perform preventive maintenance on computer/network systems and peripherals	

							*16. Explain current printing technologies	
							Other:	

0	1	2	3	4	5	6	**E. Install and troubleshoot computer operating systems and software programs**	**Notes:**
							*1. Differentiate between common operating systems, including file systems	
							*2. Install and configure operating systems (specify:_____)	
							*3. Analyze and modify system configuration files	
							*4. Perform and interpret diagnostics	
							*5. Install software and operating systems support for special needs access	
							*6. Utilize existing technical resources for problem resolution (specify:_____)	
							*7. Use file compression programs	
							*8. Demonstrate importance of system security (e.g., passwords, user accounts)	
							*9. Implement asynchronous connectivity (e.g., Internet, Intranet, dial-up, SLIP,PPP)	
							*10. Install application software and suites successfully (specify:_____)	
							*11. Troubleshoot software integration problems	
							Other:	

0	1	2	3	4	5	6	**F. Install and troubleshoot wired and wireless connectivity systems consistent with industry and safety standards**	**Notes:**
							*1. Discuss capabilities of network wiring systems	
							*2. Implement current wiring technologies (copper and fiber) according to current standards (e.g., TIA/EIA, IEEE, ANSI)	
							3. Explain advantages and disadvantages of wireless technologies	
							*4. Explain different functions of network communications equipment (e.g., modems, DSU/CSU, bridges, switches, routers, and hubs)	
							*5. Install and configure a network concentrator/hub	
							*6. Troubleshoot basic telecommunications problems (e.g., place device in loop-back model)	
							*7. Distinguish between standard analog and digital lines	
							8. Install basic telecommunication systems	
							*9. Trace wiring	
							*10. Certify wiring infrastructure to standards	
							*11. Connect asynchronous communication devices	

							*12. Troubleshoot asynchronous communication problems (e.g., break-out boxes [BOB])	
							Other:	

0	1	2	3	4	5	6	G. **Explain, diagram, and compare networking protocols and standards**	**Notes:**
							1. Explain telecommunications infrastructure (e.g., LATA, LEC, CO)	
							2. Differentiate areas of responsibilities between the telecommunications provider and their clients	
							*3. Explain current network standards and pseudo-standards (e.g., IEEE, RFC'S, ISO)	
							*4. Draw, label, and explain functions of networking layers (e.g., OSI)	
							*5. Compare and contrast network topologies (e.g., star, bus, ring, broadband, baseband)	
							*6. Diagram and explain network topologies	
							*7. Differentiate various current protocols (e.g., TCP/IP, IPX/SPX, NETBEUI, DHCP)	
							8. Differentiate between routing and switching/bridging	
							*9. Explain principles of basic network security (e.g., IP spoofing, packet sniffing, password compromise, encryption)	
							Other:	

0	1	2	3	4	5	6	H. **Install and maintain network operating systems**	**Notes:**
							*1. Specify internal components for a network server	
							*2. Install and configure network operating systems	
							*3. Install and configure network hardware (e.g., NICs)	
							*4. Implement various current protocols (e.g., TCP/IP, IPX/SPX. NETBEUI. DHCP)	
							*5. Establish client environments to utilize network resources	
							*6. Describe procedures that are executed through login scripts	
							*7. Verify client access to network resources	
							*8. Implement secured access to network resources	
							*9. Demonstrate importance of network security (e.g., passwords, user accounts)	
							Other:	

0	1	2	3	4	5	6	I. **Implement and appreciate risk management activities**	**Notes:**
							1. Perform site survey	
							2. Recommend security procedures	
							3. Verify secured access to network resources	

							4. Explain the concept of firewall usage	
							*5. Recommend backup procedures	
							*6. Perform backup operations	
							*7. Perform successful restore operations	
							*8. Implement virus protection and removal procedures for a workstation	
							*9. Discuss virus protection procedures on a network	
							*10. Implement different levels of fault tolerance (e.g., transaction tracking and logging, auditing, uninterruptible power sources [UPS], mirroring, duplexing, redundant array of inexpensive disks [RAID)	
							Other:	

0	1	2	3	4	5	6	**J. Provide and document technical support activities**	**Notes:**
							*1. Document cable infrastructure	
							*2. Document network configurations (e.g., workstation, server, router)	
							*3. Maintain maintenance logs	
							*4. Specify security procedures	
							*5. Analyze system log files	
							*6. Explain the need for network policy documentation	
							*7. Provide basic user and/or network administrator documentation	
							*8. Practice constructive problem solving with customers	
							*9. Explain concepts of remote access and phone support	
							*10. Implement remote access for customer support	
							Other:	

0	1	2	3	4	5	6	**Explain and demonstrate skills in a specialization area identified by the instructor**	**Notes:**
							1.	
							2.	
							3.	
							4.	
							5.	
							6.	

							7.	
							8.	
							9.	
							10.	